



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D3391-023
Job Sheet 168761



Part No: D3391-023

Job Qty: 1 ea

Part Name: Mid Tube Assembly



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 11/22/17

Job Tracking No:

Due Date: 12/8/17

Created By: Marie Lajeunesse

Type: Stock

Description:

Customer: Abu Dhabi Aviation (CABUD01)

PO Box 2723, Abu Dhabi International Airport Abu Dhabi, , 2723 United Arab Emirates ph:971 2 575 8000
fx:971 2 575 7775.

Note: DWG REV J SHEET 7 IPP A 05.10.20 New Issue KJ/EC IPP B IPP C 07.03.20 rev F dwg EC IPP D 07.03.28
re-format EC IPP E 07.10.31 ecn 1053P EC IPP Rev:F ECN 1056 07-11-13 DD verified by: EC IPP Rev:G 08-
09-08 new process (ecn 08-510) DD verified by:EC IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC
IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP Rev:J add in seq 140 expire date &b#
sikaflex DD 10.02.17 verified by:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		12/7/17	0.00	0.00	Start Up Skidtubes		
100	Skidtubes	1 pcs		12/7/17	0.88	2.11	Skidtubes		AP 2018/01/09
110	QC	1 pcs		12/7/17	0.00	0.00	QC5		AP 18-1-11
120	HandFinish	1 pcs		12/7/17	0.00	0.38	HandFinish1		AP 18/01/11
130	QC	1 pcs		12/7/17	0.00	0.00	QC7		BE
140	Skidtubes	1 pcs		12/7/17	0.00	2.11	Skidtubes		AP 2018-01-11
150	QC	1 pcs		12/7/17	0.00	0.00	QC5		BE
160	Skidtubes	1 pcs		12/7/17	0.00	2.11	Skidtubes		BE
170	QC	1 pcs		12/7/17	0.00	0.00	QC10		AP 18-01-11
180	QC	1 pcs		12/7/17	0.00	0.00	QC5		AP 18-01-11
185	HandFinish	1 pcs		12/7/17	0.00	0.38	HandFinish2		2018/01/17
195	Spray Paint	1 pcs		12/7/17	0.00	0.91	Spray Paint		AT 18/01/16
200	QC	1 pcs		12/7/17	0.00	0.00	QC14		AP 18-02-16
230	HandFinish	1 pcs		12/8/17	0.00	0.38	HandFinish4		AP 18-2-16
240	QC	1 pcs		12/8/17	0.00	0.00	QC5		AP 18-2-7
250	Packaging	1 pcs		12/8/17	0.00	0.00	Packaging3		
260	QC21-SA	1 Ea		12/8/17	0.00	0.00	QC21		

Part Op 100 - 1-Cut tube to finish length as per Dwg D3391 2-Drill pilot holes using DT8796 (Do not drill "B" holes) and do not drill "B" holes
Descriptions: fwd saddle hole on one side only as per Dwg D3391 3-Open aft saddles and GHW holes to Ø0.4375" except for fwd saddle
holes 4-Remove .030" from Fwd indexing Ridge as per Dwg D3391 5-Remove indexing ridge on Fwd & Aft end of
skidtube as per Dwg D3391 6-Deburr, scibe batch # on aft end. 7- Locate D3391-021 in D3391-023 at 9.00" (see view
F-F) 8- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149
locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect allingment, open up previously tranfer
drilled pilot holes in D3391-023/-021 using drill press. ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to
0.500" as per ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499". D3391-021
BATCH: 5017086 9- Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.375" holes with paint marker,
DO NOT DRILL HOLES #3-19-20 FROM FWD END OF JIG Locating from two fwd wearplate holes in D3391-023
drill remaining 6 wearplate holes in D3391-021 using DT8937 10- Open wearplate holes of D3391-023 assembly detail
section G-G to Ø0.375" (10 holes) as per Dwg D3391 Open wearplate holes of D3391-023 assembly detail section H-H to

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Or Par NC Date : Dart Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K64 1K7 CANADA TEL.: 1 613 632-5200 Email: sales@dartaero.com www.dartaerospace.com		DISPOSITION Mfg Date: 12/14/17 Job No: 168761		AGAINST DEPARTMENT/PROCESS <table border="1"> <tr> <td>Skid-tube</td><td>☐</td> <td>Cross tube</td><td>☐</td> <td>Water Jet</td><td>☐</td> <td>Engineering</td><td>☐</td> </tr> <tr> <td>Machining</td><td>☐</td> <td>Small Fab</td><td>☐</td> <td>Prod. Eng. Coord.</td><td>☐</td> <td>Quality</td><td>☐</td> </tr> <tr> <td>Thermoforming</td><td>☐</td> <td>Finishing</td><td>☐</td> <td>Rec/Store/Packaging</td><td>☐</td> <td>Other</td><td>☐</td> </tr> <tr> <td>Large Fab</td><td>☐</td> <td>Composite</td><td>☐</td> <td>Supplier</td><td>☐</td> <td></td><td></td> </tr> </table>				Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐	Machining	☐	Small Fab	☐	Prod. Eng. Coord.	☐	Quality	☐	Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐	Large Fab	☐	Composite	☐	Supplier	☐		
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		QTY Effective :		MRB (QSI042) Approval																																			
		Disposition		Completed By																																			
				Lead hand / Supervisor Approval Verification																																			
				QC / QA Coordinator Approval																																			
Mid Tube Assembly S022470 D3391 - 023 Start up Operation Change No:				FAULT CATEGORY <table border="1"> <tr> <td>☐ Temperature/Cure</td> <td>☐ Power Loss/Surge</td> <td>☐ Positioned Wrong</td> </tr> <tr> <td>☐ Set-up</td> <td>☐ Folio/Program</td> <td>☐ Outside Dimensions</td> </tr> <tr> <td>☐ BOM/Route</td> <td>☐ Grain</td> <td>☐ Over/Under tolerance</td> </tr> <tr> <td>☐ Broken/Damage/Defect</td> <td>☐ Weld</td> <td>☐ Part Incorrect</td> </tr> <tr> <td>☐ Inspection Incomplete/Unqualified</td> <td>☐ Wrong Stock Pulled</td> <td>☐ Part Lost/Missing</td> </tr> <tr> <td>☐ Contamination</td> <td>☐ Out of Sequence</td> <td>☐ Part Moved</td> </tr> <tr> <td>☐ Countersink</td> <td>☐ Off-set</td> <td>☐ Drawing</td> </tr> <tr> <td>☐ Cut Too Short</td> <td>☐ Mislabeled</td> <td>☐ Finish</td> </tr> <tr> <td>☐ Instructions Incomplete/Unclear</td> <td>☐ Fit/Function</td> <td>☐ Misread</td> </tr> <tr> <td>☐ Drill Holes</td> <td>☐ Misaligned/off center</td> <td>☐ Turning Sequence</td> </tr> </table>				☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Contamination	☐ Out of Sequence	☐ Part Moved	☐ Countersink	☐ Off-set	☐ Drawing	☐ Cut Too Short	☐ Mislabeled	☐ Finish	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence		
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Substation ☐ Past Expiry Date ☐ Misidentified ☐		Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		OTHER : _____																																			

Ø0.297" (20 holes) as per Dwg D3391 Deburr and blow out all chips from inside tube, scribe

140 - 1-Open float bag holes as per dwg 2-C'sink float bag holes as per dwg 3- Prepare tube for welding 4-Bond web in place as per Dwg D3391 & QSI 015. Adhere for 12 hours) A/R Sikaflex exp: 2018-04-21 batch#: M138654

NOTE: ENSURE WEB IS INSERTED IN AFT END OF TUBE

160 - 1-Weld crossbolt spacer as per dwg D3391 & QSI 004 2-grind weld flush

185 - Re-alodine

191 - PRIME AS PER DWG AND QSI005 4.2.1.3.3 PRIMER BATCH: _____ PAINT AS PER DWG AND QSI005 4.2.2.4 PAINT: _____

230 - 1-Install Inserts as per Dwg

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	D2500-1-100 <u>163253</u>	1	92	0	0
140-Skidtubes <u>5019103</u>	D3389-1 <u>5018928</u>	1	8	0	0
160-Skidtubes <u>5026944</u>	D3681-1 <u>5019147</u>	⑤	111	0	0
230-HandFinish	ALS4-1032-130 <u>5007299</u>	20	12,098	0	0
	D3591-1	2	85	0	0

Part Specifications

Specifications could not be found.

Plex 11/22/17 1:31 PM Dart.lajeunesse.marie

SC17+030

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER : ☐					



Dart Aerospace Ltd.
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Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO038933

Supplier: ATE003-VC
Atelier Debosselage
358 Principale
Calumet
QC
J0V 1B0 Canada
Phone: 819 242 5633

PO No: PO038933
PO Date: 2/2/18
Due Date: 2/5/18
**Purchase Order
Revision:**
Revision Date:
Ship-To Contact: Baker, Diane
Phone: dbaker@dartaero.com

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	168941	D3391-021	Fwd Tube Assembly	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$125.00/pcs At 18/02/06	\$125.00
2	168617-A	D3391-021	Fwd Tube Assembly	Firmed	2/5/18	1 pcs	0 pcs	1 pcs	\$125.00/pcs	\$125.00
3	168760-A	D3391-021	Fwd Tube Assembly	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$125.00/pcs 18/02/02 msl	\$125.00
4	168619-B	D3391-023	Mid Tube Assembly	Firmed	2/5/18	1 pcs	0 pcs	1 pcs	\$125.00/pcs	\$125.00
5	168761-A	D3391-023	Mid Tube Assembly	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$125.00/pcs 18/02/02 msl	\$125.00
6	168761	D3391-023	Mid Tube Assembly	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$125.00/pcs At 18/02/06	\$125.00
7	168621-C	D3391-025	Aft Tube Assembly	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$125.00/pcs At 18/02/06	\$125.00
8	168621-A	D3391-025	Aft Tube Assembly	Firmed	2/5/18	1 pcs	0 pcs	1 pcs	\$125.00/pcs	\$125.00
9	168621-B	D3391-025	Aft Tube Assembly	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$125.00/pcs 18/02/02 msl	\$125.00
10	169228-B	D350-636-011	Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$225.00/pcs At 18/02/06	\$225.00
11	169228	D350-636-011	Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$225.00/pcs 18/02/02 msl	\$225.00
12	169856	D350-636-011	Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$225.00/pcs 18/02/02 msl	\$225.00
13	167569	D350-636-012	Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$225.00/pcs At 18/02/06	\$225.00
14	167568-A	D350-636-012	Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$225.00/pcs At 18/02/06	\$225.00



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Tel (613) 632-5200

PURCHASE ORDER PO038933

Items

Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
			Comp.							
✓ 15	167302-B	D350-636-015	Skidtube LH, Run-on Landing Wearplates, DART(Apical) Cylind./Aerazur Float Comp.	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$225.00/pcs	\$225.00 18/02/02
✓ 16	167302	D350-636-015	Skidtube LH, Run-on Landing Wearplates, DART(Apical) Cylind./Aerazur Float Comp.	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$225.00/pcs	\$225.00 At 18/02/06
✓ 17	167339	D350-636-016	Skidtube RH, Run-on Landing Wearplates, DART(Apical) Cylind./Aerazur Float Comp.	Firmed	2/5/18	1 pcs	0 pcs 1x	1 pcs	\$225.00/pcs	\$225.00 18/02/02
Grand Total:										\$2,925.00

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 2/2/18 10:21 AM dart.baker.diane